SURVEY VESSEL URBANO MONTI

VESSEL SPECIFICATIONS

Edition	Date
00	May 21
01	Oct 21
02	Aug 22
03	Oct 23

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The Survey Vessel Urbano Monti has been built in 2007 and converted in 2020 as multi-purpose platform supply vessel designed to carry out various services for the offshore industry. Designed to be easily adaptable to various operational requirements, the vessel can be fitted for other duties such as Pre-Lay Grapnel Run (PLGR) and Post Lay Burial Operation (PLIB) as well other marine servicees as better detailed below.
The Survey Vessel Urbano Monti support has reinforced the position of Elettra Tlc on the market of marine activities related to submarine cables, as a complement of the traditional lay and maintenance activities performed by the owned cable ships already belonging to the company's fleet.

- **Survey:** After her acquisition, the ship has been equipped in 2020 with the most modern equipment for marine surveys: multi-beam echo sounder, side scan sonar, HiPap Acoustic System.
- **Pre Lay Grapnel Run (PLGR) and Route Clearance Operation (RCO):** thanks to her 350 m^2 lower deck, a new forecastle deck with 250 m^2 of surface, a bollard pulls in excess of 40 T, DP2 capability and suitable fitting of specific equipment on board, the ship can perform Pre Lay Granpnel Run and Route Clearance Operations
- **Post Lay Inspection and Burial (PLIB) / ROV** thanks to her 350 m^2 lower deck, 1.7T/m^2 deck cargo and a forecastle deck with 250 m^2, 1T/m^2, DP2 capability, the ship can be used as a platform for Post-Lay Inspection and Burial operations
- **Diving:** the ship has been prepared as per class notation for Diving support operations
- **FI-FI-1 & Oil Spill:** the ship could work as Fire Fighting Vessel, 2 off remote operated monitor FFS1200/300 Long Barrel with remotely operated deflector, 180° degrees rotation, capacity water/foam 1200/300 m3/24h. Pumping and storage capacity in case of an oil spill.
- **Rescue:** PS & STBD Rescue zone, full equipped for the Emergencies
- **Freighter:** Possible to load till 600 Tons of Cables in 2 removable cable tanks.
- **3 Points Mooring Vessel:** mooring system, 3 winches with single drum each having a capacity of 1,200m wire (38 mm diameter) and brake holding load of 70T.

Until now, she has performed **13,450 km of geophysical surveys** and **3,800 km of geotechnical surveys**. She has also been employed and **ROV support vessel** for more than **100 days**.

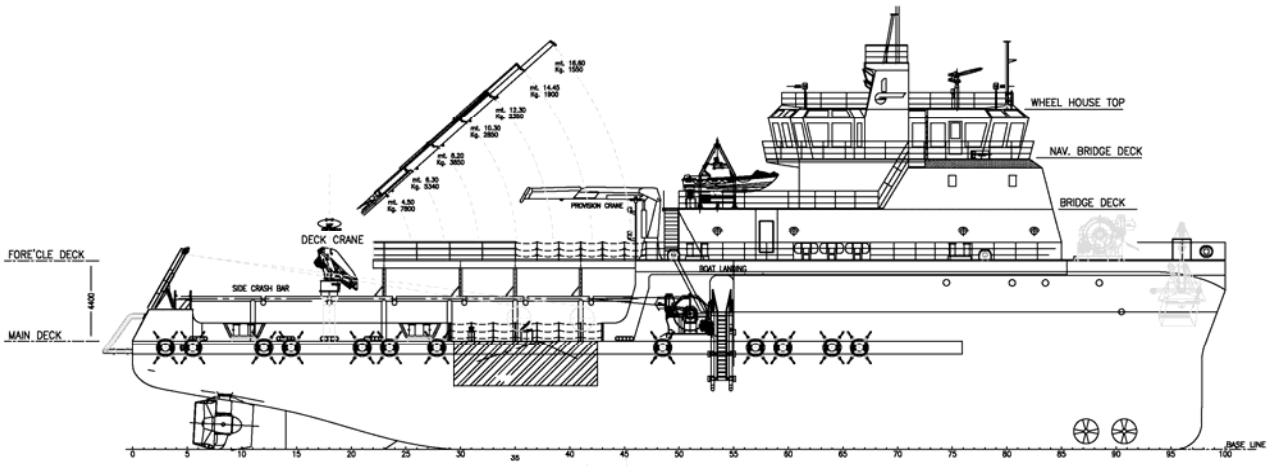
1. SV URBANO MONTI MAIN CHARACTERISTICS

1.1 Technical Specifications

- Call Sign ..... IBFX
- IMO Number 9344215
- MMSI Number 247415100
- Length overall ..... 60.0 m
- Length between perpendiculars ..... 56.45 m
- Breadth, moulded ..... 15.60 m
- Draft moulded ..... 4,50 m
- Draft extreme (including Gondola) ..... 5,30 m
- Gross tonnage ..... 1,969 T
- Net tonnage ..... 590 T
- Max speed ..... 11 kts
- Bollard pull ..... 40 T
- Flag ..... Italian
- Year built 2007
- Base Port ..... Catania (Italy)
- Classification ..... R.I.N.A. *
- Additional Class notations: AUT-UMS- IPD2-IWS-FI-Fi 1-Water spraying-Rescue-Diving ready
- Capacities:
  - Fuel oil ..... 550 m^3
  - Fresh water ..... 390 m^3
  - Ballast Water ..... 220 m^3
- Upper Deck area ..... 250 m^2
- Upper Deck cargo ..... 1.0 T/m^2
- Lower Deck area ..... 350 m^2
- Lower Deck cargo ..... 1.7 T/m^2
- Accomodation 44
  - Single cabins 6
  - Double cabins 12
  - Quadruple cabins 2

1.2 Contact Details

- Mob. phone ..... +393371449422
- Fleet voice ..... +870773131361
- Master mail ..... master.monti@elettratlc.it
- Bridge mail ..... deck.monti@elettratlc.it
- FBB500 ..... +770773211430



2. MAIN ENGINE ROOM MACHINERY

2.1 Main Engine & Aux Diesel Generators

System	Details
Main Engines	• 2x ABC 6M DZC-1000-179-A: 1000 rpm 1400 kW (100%) each
Aux Diesel Generators	• 2 x Man D 2876 LE 301: 1800 rpm 320 kW (100%) each
Emergency Generator	• Man D 0824 LE 201: 1800 rpm 118 kW
Shaft Generator x 2	• 635 Kw each

2.2 Propulsion

System	Details
Main Propulsion	• 2 x Azi Schottel rudder-propeller type SRP1012 CP: 1200 kW each
Tunnel Thrusters	• 2 x Tunnel Thrusters HRP 4009 TT CP: 400 kw each

2.3. Speed and consumption

- In transit .....9 kn – 7 T/day
- Full speed .....11 kn – 10 T/day
- In DP .....5 T/day
- In port ..... .1.5 T/day

Important note: the above figures are merely indicative and based on the elaboration of the vessel data collected along her operations performed in optimal weather conditions.

3. BRIDGE EQUIPMENT

3.1 Dynamic Positioning System

The vessel is classified DP2, equipped with Kongsberg K-Pos-DP-21 and is capable to operate, with the worst heading, in following limit weather conditions (vessel navigation only):

- Sea state 5
- Wind ..... 15.0 m/s
- Current .....1.0 m/s

3.2 GMDSS and Communication Equipment

Equipment	Details
Acoustic tracking	• 1 x HIPAP 502, Kongsberg
Inmarsat C	• 1 x Furuno Felcom 15; Furuno NBDP 1x Jrc jue-87
ECG terminal	• 1 x Furuno Felcom 15; N.1 Furuno NBDP
ECG rinter	• 1 x Furuno mod. PP-510 1x Jrcnkg-900
MF/HF	• 1 x Furuno FS5000
VHF (DSC)	• 1 x Sailor DSC-6222
VHF (RTX)	• 1 x Jhs 800
VHF (portable)	• 4 x Entel mod. HT 6492 x Sailor type SP3510
A.I.S.	• 1 x Nsr - NSI-1000 UAIS
L.R.I.T.	• 1 x Furuno Felcom15 W/IC-215 (LCD)
E.P.I.R.B.	• 1 x Mcmurdo mod. Smartfind G5
SART	• 1 x Pathfinder mod. PRO • 1x Sailor KLSS4-1
Fax	• 1 x JMC mod. FX-220
Navtex receiver	• 1 x Furuno NX 700A
Inmarsat F	• 1 x Thrane&Thrane mod. TT3670A
VSat	• 2 x Cobam Sailor 900 HP
FBB500	• Thrane & Thrane

3.3. Bridge Equipment

Equipment	Details
Acoustic tracking	• 1 x HIPAP 502, Kongsberg
Radars	• 2 x JRC-5410 X-band
BNWAS	• 1 x BNWAS Furuno BR-500
G.P.S.	• 2 x Furuno GP-90
Gyro Compass	• 3 x Anschuertz Raytheon mod. standard 22 type 110-233
Compass Monitor	• 1 x Anschuertz Raytheon
Echosounder	• 1 x Furuno FE-700
Navigation equipment	• 2 x Simrad PLECDIS900 MK5A W/ M5027
Weather instruments:	• 3 x wind sensors • 2 x Thermometer • 1 x barometer

Autopilot	• 1 x Anschuertz Raytheon type AP02-S01
Doppler Log	• 1 x Furuno DS-80
Speed log	• 1 x Furuno DS-80
Sound receprion system	• 1 x Zenitel Marine VSS-111

3.4. Positioning Reference System

System	Details
Dynamic Pos System	• 1 x Kongsberg K-POS 21 + CJOY
Acoustic tracking	• 1 x HIPAP 502, Kongsberg
DGPS	• 2 x Kongsberg type DPS 112, Kongsberg type DPS 114
Motion reference units	• 2 x KONGSBERG MRU-D Motion Reference Unit
Gyro compass	• 3 x Master Gyro Compass C. Plath Navigat X Mk 1, Mod 10
Wind sensors	• 3 x Gill Ultrasonic Wind Sensor

4. SURVEY EQUIPMENT

The installed Survey Equipment allows for an accurate inspection and Survey of the Seabed:

4.1 Offshore Survey Equiment

Equipment	Characteristic
Multibeam	• Kongsberg EM 122, 12 Khz full ocean depth • Kongsberg EM 2040 1x2, 400 Hz, up 300m wd
SVS(x2)	• Valeport Mini SVS + Valeport-MIDAS-CTD
Positioning System Kongsberg	• Seapath 380-5
Online Data Navigation System	• QINSy Survey Planning, Acquisition, Real-time software
MRU	• Kongsberg MRU 5-Motion Reference Unit
Acoustic Positioning System	• Kongsberg Hipap 502
Dynamic Positioning system	• Kongsberg K-POS-21 + CJOY
SSS/SBP	• EdgeTech-2000-FS-Combined-Sidescan-Sub-Bottom-System
SSS/SBP Acquisition / Mosaicking Software/CPT rep	• Chesapeake Sonar Wiz.
MAG	• Geometrics G882 interfaced with SSS
Offline MBES Data Processing System–	• QPS QIMERA
Projecting software	• Autochart - Autocad
Database management Software	• Geomedia

Equipment	Characteristic
Printer	• AO Plotter
Core	• 3/6m Gravity core + winch with 2000 m cable length
CPT	• Datem Neptune 3000, 1m to 10m rod penetration
CPT data processing	• gINT / Datgel Geotechnical and Geoenvironmental reporting
Geotechnical equipment	• Van Veen Box Corer: 2x5l, 1x25l, 1x40l
Geotechnical testing equipment	• Torvane, Pocket Penetrometer, Munsell color scale

4.2 Nearshore Survey Equiment

When the local conditions allow, the vessel can perofm nearshore survey operations because is equipped with a smallboat having the following characteristics:

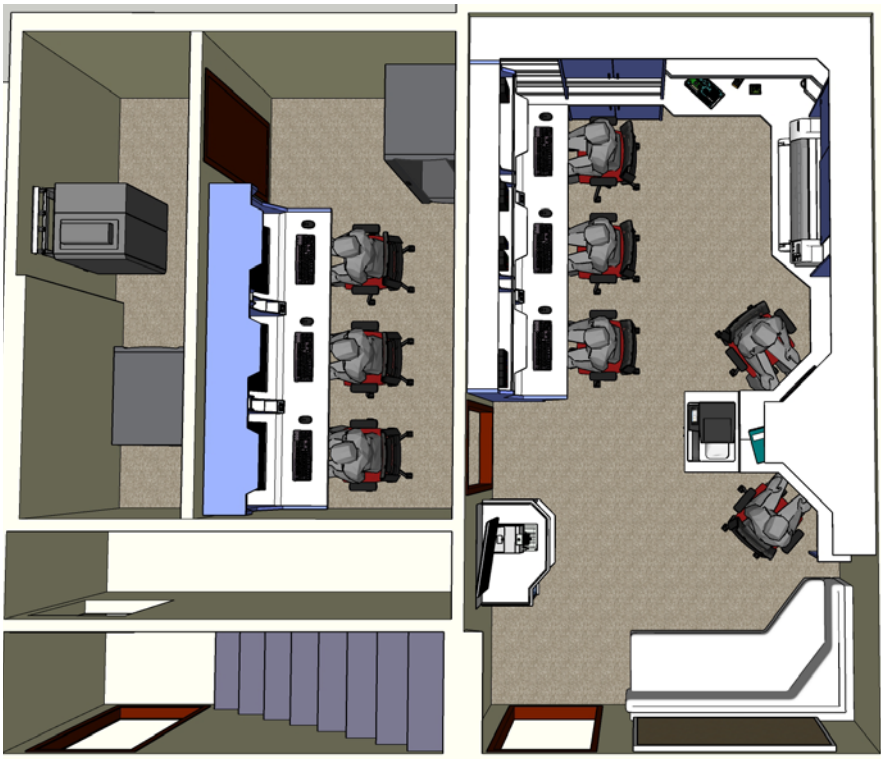
- Manufacturer: ICON MARINE
- Model: 19 S
- Dimensions: 5.90 m x 2.36 m
- Average draft: 0.45 m
- Engine Manufacturer: Mercury Marine
- Engine Model: 40ELPT CT
- Outboard Power: 29 kw@6000 rpm:

During the nearshore operation the smallboat will work using the following dedicated survey equipment

Equipment	Characteristic
Multibeam/SSS	• Geoswath GS4R 250Khz
Positioning, heading and motion	• RTK POS MV SurfMaster SFF IP68
SBP	• Geopulse Compact OTS

4.3. Survey Room Layout

Very large and technological Survey data processing and acquisition rooms are located inside the Vessel, in the forecastle deck.



5. DECK EQUIPMENT

5.1. Deck Cranes and Lifting Equipment

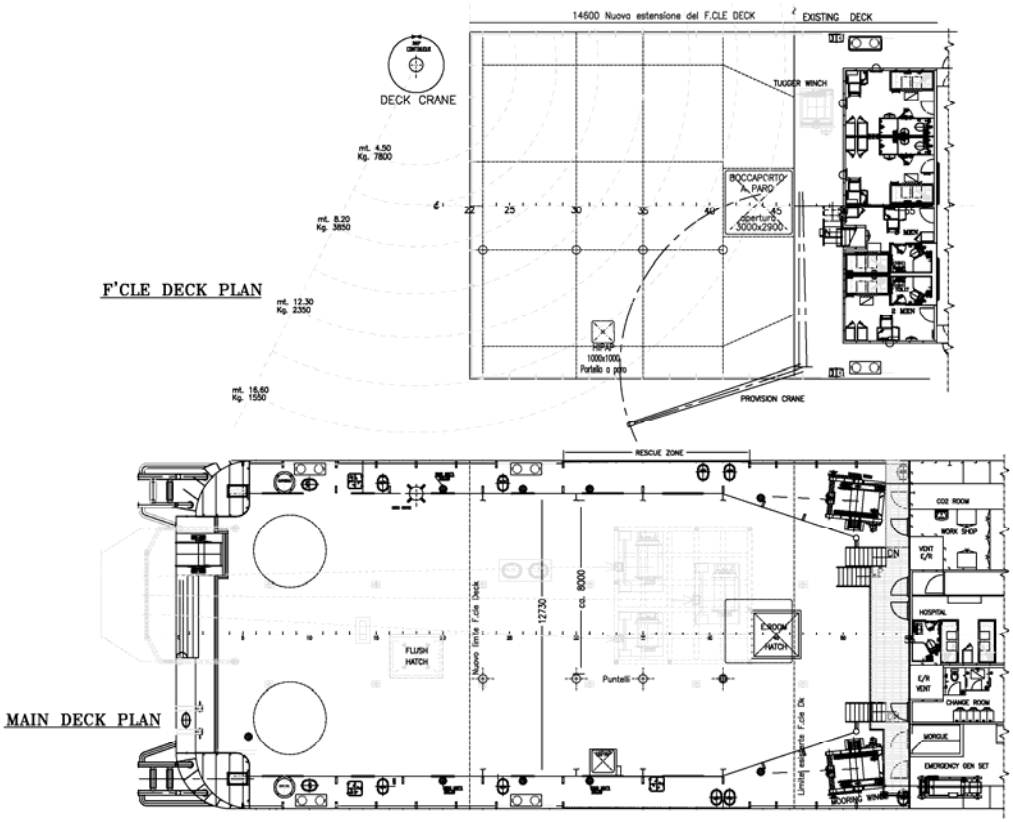
Crane	Lifing Capacity [SWL]
Electro-hydraulic Stbd crane Fore castle	1,5 T @ 15 m
Electro-hydraulic Port side telescopic	7,8 T @ 4,5 m – 1,5 T @ 16.6 m
A-Frame (located at Port side)	9.0 T

5.2. Cable sheave

Sheave	diameter
Stern sheave	2.0 m

5.3. Winches

Crane	Lifing Capacity [SWL]
Anchor Mooring winches	• 2 Fore – 1 Aft
CPT	• MacArtney CPT Winch – 2 km CPT umbilical
SSS/SBP	• SEATOW 6000 electrical – 6 Km cable length
CORING	• Motive Offshore 2020 – 2 km cable length
SVP	• F Castle deck Tugger winch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EXISTING DECK
DECK CRANE
TUGGER WINCH
mt. 4.50
Kg. 7800
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mt. 12.30
Kg. 2350
mt. 16.60
Kg. 1550
BOCCAPORTO
A PARO
apertura
3000x2900
1000x1000
Portello a poro
PROVISION CRANE
F'CLE DECK PLAN
RESCUE ZONE
CO2 ROOM
WORK SHOP
VENT C/R
HOSPITAL
C/R VENT
CHANGE ROOM
MORGUE
EMERGENCY GEN SET
FLUSH HATCH
Nuovo limite F.cle Dk
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Puntelli
C ROOM HATCH
Limite esistente F.cle Dk
MAIN DECK PLAN